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ABSTRACT

Economic decline is indicated by productivity per man-hour of work, per capita real personal income, and real gross national product. Unless new technology overcomes the force of a stable population and develops new sources of raw materials and of energy, economic decline seems a likely possibility. Creative management is a process of planning, technology, and leadership, and ought to be both innovative and constructive. The role of state governments in higher education provides the particular focus of this discussion because of the state government's involvement with publicly sponsored colleges and universities intended to meet the educational needs of the state, control of programs at these institutions, control of the general financing and support, state student financial assistance programs, and the setting of state standards that have to be met by private institutions. Each of these functions allows for a great deal of creative management in areas such as attracting the nontraditional student in an era of otherwise declining enrollments. The state governments are in a strong position of influence and are able to motivate changes in attitudes and behavior within individual colleges and universities. (JMF)

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# CREATIVE MANAGEMENT IN A TIME OF ECONOMIC DECLINE

A Presentation
for the
Inservice Education Program Seminar
of the
State Higher Education Executive Officers Association
New Orleans
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## I

Creative management in a time of economic decline is a subject that calls for careful definition. Some understanding of both sets of terms is essential for any meaningful discussion. Economic decline is a concept that is far from self-defining, and creative management is a designation that may easily be employed in different ways.

Obviously our primary interest here is focused upon the possible interaction between creative management and economic decline. If in fact the future course of economic events in the United States is a period of economic decline, then all of us in higher education--and in other institutions of society as well--will hope that somehow, someway, this economic decline will be mitigated or will be made

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acceptable through a creative management response. If there is a process that we can identify and encourage as one of creative management, then all of us in higher education--and in other institutions of society as well--will hope that somehow, someway, this creative management will be equal to the complexities of economic decline.

This coupling of economic decline and management as major concerns of stimulus and response in American society has been provided primarily in some of the recent writings of Kenneth E. Boulding. Boulding's article in the June 1975 issue of Change is a useful summary of his point of view, and is a statement specifically oriented toward elementary-secondary and higher education. Boulding identifies student enrollment, per capita real income, productivity, and real gross national product as the principal educational and economic indicators subject to "slowdown" or to actual decline in the next decade or so. Boulding asserts that the American population may well become stationary by the middle of the next century, that the standard of productivity and the level of real per capital personal income are likely to decline in the near future because of the nature of employment in our economy today, and that the real gross national product will stabilize or decline as the factors of production stabilize or decline.

Boulding goes on to declare that the implications of these anticipated economic events, as well as the implications of the social forces generated by these economic events, will be profound for the future of education in general, and for higher education

in particular. Boulding suggests that education is likely to be the first major segment of the economy to suffer decline, and he adds that the way in which this decline is managed within higher education may very well "set the tone" for the way in which economic decline will be handled by other social institutions. Although I entertain certain reservations about this last observation, let us accept the general proposition that circumstances of economic decline will indeed constitute a new and formidable challenge to management and to governance for all our social institutions. Boulding comments that American institutions throughout our national history have been oriented to circumstances of economic growth. A profound change will now be required in our habits, in our ways of thinking, in our "standards of decision-making," and probably in our institutional structures in order for our society to cope with economic decline as the course of economic events.

It is noteworthy I think that Boulding sees the response to economic decline as the province of management. Boulding does not give us a definition of management, and it seems to me that he confuses two somewhat different concepts in his discussion, the concept of management and the concept of governance in our various social institutions and in our various individual enterprises. I shall return shortly to this distinction, and to this matter of definition.

In any discussion of management in the social institution of higher education it is important for us to have some concern with the level of management endeavor. The social institution

of higher education in our country is a complex inter-weaving of enterprises, governments, students and other clientele groups, professions and other employers of educated talent, alumni, and concerned individuals and agencies. Management as a process that I propose to describe more fully in a moment is to be found within particular enterprises, within governments, and elsewhere. In this gathering and in this discussion the creative management we are concerned to encourage and to achieve is, I take it, at the level of state governments.

I think we may reasonably accept as our definition of economic decline the indicators suggested by Boulding: productivity per man hour of work, per capital real personal income, and real gross national product. A circumstance of continuing decline in these three measurements of material well-being would surely be taken as a convincing indication of economic decline. Furthermore, most persons are today well aware of the forces that may indeed be propelling the American economy toward decline rather than toward further growth. The question that troubles many thoughtful Americans today is the question whether or not the American economy has reached its limits of growth in terms of available raw materials, energy resources, labor supply, and productive technology. The assumption of economic decline is an assumption that the American economy has already exceeded the limits of growth. This assumption is both basic and critical, and far too complex for consideration here.

We may make one assertion about the limits of economic growth. Without doubt it is time for higher education's intellectual resources to be devoted on a substantial scale to the subject of the economic limits of growth. Of all institutions in American society, higher education is the appropriate one to begin to undertake the research needed to determine the limits of growth for the American economy and to explore the alternative social models of a no growth or of a declining economy.

The possibility of economic decline should be clear to us all, even if the inevitability of such decline must still be open to analysis and to events. A stable population, a decline in available raw materials, a decline in energy resources, a stabilized or declining productive output per man-hour of work, a decline in real per capita income-- all of these factors can bring about economic decline. It is of course possible that an advancing knowledge and an advancing technology may overcome the limits of a stable population and a stable work force and may find new sources of raw materials and of energy. If this possibility should come to pass, then economic decline need not occur. If this turn of events should indeed take place, then higher education will surely be in the forefront of American institutions pointing the way toward further economic growth.

Economic decline becomes then one set of assumptions for higher education as it confronts the next 25 years. Economic decline

is a scenario for contingency planning. It is a scenario none in higher education management can afford to ignore. It is a scenario with a warning, with an exhortation, for change.

In the hope that this very general excursion into economic concepts may afford some definition of the term economic decline in this discussion, let us turn to the other phrase, creative management. What are the characteristics of creative management that we in higher education may be called upon to exercise as we confront the contingency of economic decline? In my own development of knowledge and experience I have found that there are just about as many definitions of management as there are managers, or persons who study management. I prefer to employ a very simple definition. I must begin with the concept of organization: organization is people working together in order to produce some desired output of goods or services. Management is the structure and process whereby people working together do in fact produce the desired output.

I have read and heard many complicated definitions of management, definitions using such words as directing, budgeting, staffing, coordinating, motivating, communicating, reporting, and other terms. Today one encounters especially the phrase management by objectives. I prefer to think of management as a process as comprising two indispensable elements: planning and technology.

I am tempted to add a third ingredient, leadership. I do not include this vital element here for two reasons. Essential as is leadership to management it is equally essential to governance, to

the process whereby the basic purposes, the institutions, and the procedures of a society are decided. I believe very strongly that the process of governance must not and should not be equated with the process of management. The two processes in society and in the behavior of institutions and of enterprises are different. And leadership is the indispensable element of linkage between management and governance, and between governance and management. Leadership is vital to both management and governance, but above all else leadership means providing the absolutely essential linkage between management and governance. If I were to pursue this concept of leadership here I fear there would be no end to this paper!

By planning as one element of management I mean the formulation of purposes and of values to be achieved by people working together, and I also mean the determination of programs and of program objectives calculated to give specific output definition to purposes and values. If we wish to do so, we may label the first part of this planning endeavor as policy planning and the second part as program planning. These kinds of planning are a primary characteristic of management, no matter how formal, no matter how explicit or implicit, the planning may be in practice.

By technology as the other element of management I mean the entire system of work accomplishment, from the provision of required inputs of various resources through a productive procedure to the final output of goods or services. I prefer this word technology as a label for the process of work performance because

it connotes both practicality and periodic change. The word technology implies that there is a practical means available or designable to achieve a desired output, and that this practical means can and will be undertaken. Technology suggests that resources are available, that a work process is at hand, and that an intended output can be accomplished. Furthermore, the word technology for most of us implies change, implies adjustment and improvement. We are accustomed to think of technology not as fixed and immutable but as dynamic and flexible. Management is the implementation of a technology.

In our definition of management therefore we need always to bear in mind the elements of planning and of technology. The essence of management in an organizational context is embodied I believe in these two processes of planning and of technology.

In the formulation of the problem for our discussion here the descriptive modifier creative has been added to the word management. What then do we have in mind when we think of creative management? I believe this qualifying label creative is intended to suggest to us the desirability and the expectation that management ought to be both innovative and constructive. The label creative is a norm or standard for management behavior. The word creative is an exhortation that management in facing the prospect of a changing environment shall be prepared to explore new and acceptable ways of accomplishing needed outputs.

Our problem then is to bring together creative management with circumstances of economic decline. An era of economic decline, if

such indeed is to be our social outlook, will necessarily be an era of change. The dimensions of change, the burden of change, and the impact of change become major concerns for creative management. We hope in an era of change we can plan activities in the light of rational choices among purposes, values, and objectives rather than leaving the dimensions of change to the force of events. Creative management implies preparation for change rather than blind response to change. I am not entirely convinced in my own mind that creative management will be entirely equal to the demands of change, but as an article of profound faith I must declare a preference for planning above chance, although I am well aware that the intellect and purpose of man can never be entirely the master of man's fate.

If it appears that I have belabored the problem of definition in this discussion, I must plead guilty to the charge. Too often we enter upon the exploration of matters of importance without an adequate and explicit statement of our terms and of our assumptions. Creative management in a time of economic decline is far too critical a subject for consideration for any of us to be careless about what we mean by both sets of words.

II

Our interest here is in the application of creative management to the problems of economic decline within the institutional setting of higher education. I have referred earlier to the complex nature of this social institution, with its array of separate enterprises,

its various sponsors, its various clienteles, and its various governmental roles. When we speak of creative management in higher education we must at the same time identify the point or location in this complex institutional structure where this creative management should be expected to evidence itself. The obvious expectation of course is that creative management should be manifest at all levels of institutional structure. Not only is our discussion here focused upon the role of state governments in higher education, but also I am prepared to argue that creative management is more essential and can accomplish more at the level of state government than at any other point in the institutional context of higher education.

I assume that in this group I do not need to argue at length about the vital place of state government in the functioning of higher education. To be sure, without federal government support and assistance higher education enterprises would be able to do little in the way of conducting sponsored research projects. And much of the effort today to achieve equality of access to colleges and universities regardless of socio-economic status depends upon federal government programs, including veterans' benefits, social security payments, and student assistance grants. But in terms of enrollment, nearly 75 percent of all students attend public sponsored colleges and universities created under state government law, and state governments provide the largest single source of operating income received by all individual colleges and universities, some 35 percent. Furthermore, the policies of state government

necessarily have a substantial impact upon the functioning of privately sponsored colleges and universities.

The role of state government in the field of higher education has involved at least five major areas or fields of attention. First, state governments by law or by constitutional prescription have provided for the establishment and location of publicly sponsored colleges and universities to meet the perceived higher education needs of the citizens of the state. Secondly, state governments have determined the kinds of instructional and other programs to be offered by the various publicly sponsored colleges and universities, although in some states this determination of programs has appeared only as a recent kind of state government action. In the third place, state governments have decided the general financing pattern and the general magnitude of financial support for the operation primarily of instructional programs, along with the related support programs. The two major sources of financing instructional and related programs have been appropriations from state tax revenues and tuition charges to students. In the fourth place, and again relatively recently, state governments have moved to establish student financial assistance programs, primarily to make certain that tuition charges at state colleges and universities did not deny access to students from lower income families. And in the fifth place, state governments by special charter and by law have enabled private voluntary groups to establish and operate colleges and universities, sometimes subject to certain standards of performance

and more recently in a few instances subject to some modest state government financial support.

The prospect of economic decline requires a creative management at the state government level to re-examine carefully and analytically each of these state government roles: the number and location of public colleges and universities, the number and location of instructional programs, the pattern and magnitude of state financial support of publicly sponsored colleges and universities, the role and impact of state financing of students, and the relationship of state government to privately sponsored colleges and universities. On the one hand state government need to assess the probable impact of economic decline upon each of these areas of action, and on the other hand creative management at the state government level needs to explore possible and desirable responses to circumstances of economic decline in each of these areas of action.

Let me emphasize here that this creative management must be provided through state boards of higher education. In this connection it makes no difference as I view the situation whether a state board of higher education is a state-wide planning and coordinating board or a state-wide governing board. Regardless of the kind of authority and responsibility vested in the state board of higher education, the state board is the one and only state government agency competent to develop and provide a creative management response to circumstances of economic decline. To be sure, a creative management response is not the final determinant of a future course

of action. The process of governance within a state will decide the action to be taken. Management leadership and political leadership may resolve a recommended policy and program of change; the governance process will still have to make the final decision.

I shall want to refer to this matter again later in the discussion, but let me underline here the proposition that creative management at the level of state government is different from creative management at the level of the individual college or university enterprise. Creative management is much to be desired at both levels. It is creative management at the level of state government that will have to worry about the planning and the technology appropriate to resolution of state government action in the five areas of state government interest outlined above.

In terms of the numbers and location of publicly sponsored colleges and universities, it has been often said in the past two or three years that state governments overbuilt needed facilities during the 1960's. I question if many facilities were overbuilt for the needs of the 1960's; it may well be that in some states in some particular instances public higher education facilities were overbuilt for the needs of the late 1970's and of the 1980's. At least it is now clear that few if any additional facilities will need to be constructed in the next decade or so, and that new construction will involve primarily the replacement of obsolete facilities.

At the same time it will not be a simple matter to close some existing facilities, to consolidate others, and to modify the mission of still others, especially in a period of economic decline. Every

facility is not just a higher educational enterprise in and of itself; each one is also an economic asset to the community in which it is located. Creative management will have to explore alternative use of facilities that will not destroy or remove an economic resource within particular geographical locations of the state.

The period of considerable expansion of the various instructional programs offered by publicly sponsored colleges and universities has probably also come to an end today, with the possible exception of some programs in the health professions. Some consolidation of programs of small enrollment may be needed in order to maintain quality standards of instruction and in order to eliminate unduly high cost of instruction per student. There is surely a need to reconstruct a viable concept of general education as an instructional program available to all students as a matter of personal stimulation and of intellectual heritage. And some instructional programs specifically oriented toward professional employment may well have to be reduced in student enrollment because of declining job opportunities, as in the labor market for Ph.D. recipients. Creative management at the level of state government will have no small chore on its hands as it seeks to encourage instructional program changes to accord with changing economic circumstances.

Already it is apparent that a substantial gulf is beginning to occur between the income wants of individual public colleges and

universities and the appropriation willingness of state legislatures. Having achieved a certain measure of affluence, publicly sponsored colleges and universities must be expected to behave in a manner calculated to maintain and even somewhat to improve their current status. Faculty members may be inclined to see collective bargaining as a useful tactic in the strategy of income maintenance and improvement, but I am disposed to view this particular refuge as unlikely to achieve its objective and as destructive of other academic values. It is quite doubtful indeed that voter-elected representatives will long seek to extract increased resources from taxpayers, especially if the national economy were to enter a prolonged period of decline. Creative management will necessarily have to explore new patterns of financial support for publicly sponsored colleges and universities and may even be challenged to define some such concept as "equality of sacrifice" for public higher education in a declining economy.

Insofar as the financing of students in their access to higher education is concerned, state governments may need to reexamine their role in terms of federal government programs to assist students and in terms of reduced student enrollments. Continued confusion about the basic purposes of higher education will complicate consideration of the issue of access. Is higher education intended primarily to stimulate and encourage the intellectual development of an individual? Or is higher education primarily intended to prepare individuals for paraprofessional and professional careers? I think we may properly say that higher education as a social institution in our country has

professed both objectives, but I think we may fairly say also that the secord of these two purposes has tended over the years to receive the greater emphasis in public expectation and in actual performance. Creative management must now confront the question of what kind of access to higher education shall be encouraged when and if the primary purpose changes from preparation for employment to stimulation of personal intellectual development.

The issue of the appropriate and desirable relationship of state government to privately sponsored colleges and universities is already a matter of controversy in our country; in some places the issue is a matter of bitter conflict between the public and private sectors of higher education. Shall privately sponsored colleges and universities be left to their own fate, whatever that may be in each individual case? Shall privately sponsored colleges and universities be granted some state government financial assistance in order to ensure their survival, and if so under what conditions? Shall privately sponsored colleges and universities be offered the option of absorption into the public structure of higher education enterprises, with a role and mission appropriate to the perceived needs of the public structure? These choices appear to be the principal options. Creative management will have to formulate a desirable course of state government action. And if this formulation must occur in the context of economic decline, the planning task will be all the more difficult to carry through to decision and implementation.

Let me point out once again in connection with this part of our discussion that creative management may plan and may perform, but that processes of governance must decide. The arrangements for governance in a state government obviously include the executive, the legislature, and the judiciary. Creative management may propose. Creative governance will dispose.

III

The question of student enrollment is so critical to the future of higher education that it must be considered separately in any discussion of creative management and of economic decline. There is no need here to dwell at length upon the prospects--indeed the certainty--of demographic changes in our population. Just as we in higher education about 1954 began to foresee the advent of a "tidal wave" of students to be experienced in the 1960's, so we in 1975 can clearly foresee a decline of students in the traditional college age cohort to be experienced in the 1980's.

Let us for the moment look at the enrollment projections for the years from 1975 to 2000 as set forth in the 1975 report More Than Survival issued by the Carnegie Foundation for the Advancement of Teaching. These particular projections indicate a stable enrollment for the 18 to 21 year-old undergraduate degree-credit student; some increase in the 22-year old and older undergraduate degree-credit student; a generally stable enrollment of students for first professional degrees and of students for graduate degrees; and some

increase for non-degree credit students. Thus from a total of some 10 million students in the autumn of 1975 the Carnegie Foundation report projects further growth to a total enrollment of almost 13 million students as of the year 2000.

There is the further factor of the probable distribution of this total enrollment among particular kinds of colleges and universities. Here the Carnegie Foundation report is content to look no farther ahead than 1985, and the projections are not sharply divided between publicly sponsored and privately sponsored colleges and universities. Nonetheless the Carnegie Foundation report suggests a differential kind of enrollment experience over the next ten years for various kinds of colleges and universities. For example, if a college or university enrolls primarily undergraduate degree-credit students in the 18 to 22 year old cohort, then the report indicates that this enrollment may remain steady or decline over the next several years.

My own personal judgment is that the Carnegie Foundation report tends to be somewhat on the optimistic side insofar as these enrollment projections are concerned. The report tends to accept an assumption that further economic growth will take place in the American economy, although this assumption is by no means explicit and its magnitude is by no means forecast. Moreover, the projections rest upon the adoption of certain recommended college and university policies and of certain recommended public policies the implementation of which is scarcely assured. In the absence of public

policy action I would expect enrollment declines of substantial magnitude in the private sector of higher education during the next decade. In the absence of some real economic growth as indicated by both per capita real personal income and real gross national product, I would expect substantial enrollment decline in all degree-credit instructional programs.

It is the labor market demand for college graduates that presents, I believe, the major economic concern for higher education over the next decade and over the remainder of this century. Already there are economists warning of us of an economic saturation of our labor market with college and university educated talent. It is relatively easy for anyone today to declare that the time has arrived when higher education must stop implicitly or explicitly selling itself as an economic investment for the individual, as a sure guarantee of a good, paying job in the American economy. The fact is that higher education has reached its current status of relative affluence because of a widespread public belief that higher education contributed to economic growth and to the material well-being of its graduates. Any considerable change in this public belief--and some change I think is already clearly discernible--can only bring about considerable change within higher education itself.

The changing composition of the American labor market is so important an economic factor for higher education that we need to examine this subject in more than a purely off-hand way. The essential data are shown in the accompanying table. The American labor force

TABLE 1

COMPOSITION OF AMERICAN LABOR FORCE
1950 and 1974
(in thousands)

| | 1950 | 1974 |
|---|---|---|
| Total | 63,858 | 91,736 |
| Armed Forces | 1,650 | 2,242 |
| Employed | | |
| Agricultural | 7,160 | 3,437 |
| Nonagricultural | 51,760 | 81,756 |
| Unemployed | 3,288 | 4,301 |
| Nonagricultural Employment | | |
| Mining | 901 | 652 |
| Contract construction | 2,333 | 3,513 |
| Manufacturing | 15,241 | 19,785 |
| Transportation & utilities | 4,034 | 4,636 |
| Wholesale & retail trade | 9,386 | 16,398 |
| Finance, insurance, real estate | 1,919 | 4,120 |
| Services | 5,382 | 13,294 |
| Government | 6,025 | 14,280 |
| Major Occupational Group | | |
| Professional & technical | 4,490 | 12,446 |
| Managers and administrators | 6,429 | 8,883 |
| Salesworkers | 3,822 | 5,416 |
| Clerical workers | 7,632 | 14,845 |
| Crafts and kindred | 7,670 | 11,361 |
| Operatives | 12,146 | 13,749 |
| Service workers | 6,535 | 11,353 |
| Farm workers | 7,408 | 3,066 |

Source: Statistical Abstract of the United States, 1974, pp.336, 345, and 350. The data for 1974 are April, estimated.

increased by about 50 percent between 1950 and 1974, but employment in agriculture decreased by over 50 percent. In the broad category of non-agricultural employment, employment in mining declined, employment in contract construction increased 50 percent, employment in manufacturing increased just 30 percent, and employment in transportation and utilities increased only by 15 percent. When we turn to the service businesses, the story is quite different. Employment in wholesale and retail trade went up by nearly 70 percent, employment in finance and financial services went up 115 percent, employment in services went up nearly 150 percent, and employment in government went up nearly 140 percent.

These data are important for at least four reasons. First, the great expansion of employment in the post-World War II economy has been in the service businesses and not in the businesses producing capital and consumer goods, in the transportation businesses, and in the utilities businesses. Secondly, the service businesses tend to be labor intensive and tend to increase productivity in terms of units of output per man-hour of work only at a relatively slow rate of growth if at all. There is a study made for the Carnegie Commission for Higher Education that suggests there has been no productivity increase of any kind in higher education between 1930 and 1967. Productivity increases have been most notable in agriculture, in mining, in transportation, in utilities, and in manufacturing business which are capital intensive, and which incidentally use energy resources more extensively than labor resources. It seems

likely that one of the forces for inflation in our economy has been the cost-push of service business compensation, a cost-push not accompanied as in the goods business by an increase in output per man-hour. In the third place, this remarkable expansion in employment by the service businesses was encouraged or assisted by higher education which supplied so much of the required professional and managerial talent needed by this development. And in the fourth place, there now arises the question whether or not there will be still further change in the composition of the American labor force during the next 25 years.

A somewhat better indication of the relationship between employment and higher education is evident from an examination of the data about the nature of the jobs performed by individuals in the labor market rather than by the nature of the employer. When we look at these data on the nature of the job, we notice that from 1950 to 1974 the number of professional and technical workers increased by 130 percent, the number of administrative and managerial workers increased by 36 percent, the number of salesworkers increased by 42 percent, and the number of clerical workers increased by nearly 95 percent. On the other hand, the number of persons employed as operatives went up only 13 percent, the number of persons employed as craftsmen went up nearly 50 percent, the number of service workers went up 75 percent, and the number of farm workers went down 60 percent.

It is unfortunate that we lack any half-way precise information about the relationship of jobs to educational preparation. I think we can reasonably assume that professional and technical jobs require an associate degree or a higher degree, that administrative and managerial jobs are increasingly occupied by persons with at least a baccalaureate, and that in other jobs such as many service and farm occupations a considerable proportion of the persons employed have an associate degree or higher. There are sampling studies of the proportion of these jobs held by college educated persons, but these studies have usually been of a restricted rather than inclusive statistical universe.

There are economists today like Stephen P. Dresch who are saying that the current labor market is saturated with college graduates. These economists do not expect the present composition of the labor force to be substantially altered in the next 25 years. They tell us that the changes of the past 25 or 30 years have now greatly slowed down, if not completely ended. Only modest adjustments in the nature of the jobs held by American participants in the labor force are anticipated by these economists in the remainder of this century. Indeed, there is some question whether or not the total employment requirements of the American economy will expand in the next two or three decades.

If indeed the labor force of the American economy is now saturated with college educated talent, and if indeed this economic saturation of the labor market by higher education is a current

and prospective reality, then the economic decline of immediate and major importance to higher education is the adjustment process required by the restricted employment market for college graduates. Even if economic growth as measured by per capita real income and per capita gross national product were to be resumed, there might still be economic decline for higher education. The economists persuaded of education saturation foresee the possibility of a surplus of college educated talent in the American labor force until at least 1995!

Creative management in higher education confronts its most challenging single test in terms of deciding how best to adjust to the job market for college graduates.

The Carnegie Commission for Higher Education in its 1973 report on College Graduates and Jobs suggested that public policy actions might alter the labor market prospects for college graduates by reducing hours of work and spreading employment, by increasing expenditures for teaching and related activities such as day-care centers, by increasing expenditures for research and development, and by increasing the flow of funds for the creative and performing arts. The report also suggested action to increase employment for the non-college graduate and so to break the public impression that a college education means assured employment. The difficulty with most of these proposed lines of action is the requirement of increased public expenditure at a time when there is substantial uncertainty about desirable public economic policy.

Much of the adjustment to the changing market demand for college graduates must be made in terms of instructional programs at the college and university level, and in terms of the expectations of students. Some of the desirable kinds of change are outlined in the Carnegie Commission report. The problem for state government is how to encourage these kinds of adjustment.

IV

How then can creative management at the level of state government motivate change at the level of the individual college or university? Here is the basic question of all. It is customary for critics of colleges and universities to say that faculties are full of ideas about desirable changes in other social institutions but woefully lacking in ideas or desire to bring about change within their own college or university. This kind of criticism reveals a profound ignorance of how colleges and universities operate. Faculty criticism of social institutions, including the institution of higher education, is the expression of a highly individualized and personal point of view. Faculties as faculties do not vote on social criticism; individual faculty members voice their personal social criticism based upon their own knowledge and set of values. When faculty members as a collective group undertake to resolve issues of change within a particular college or university where they profess their knowledge, there are so many individual points of view and so many individual vested interests that it is very difficult for any consensus to emerge about desirable change in customary faculty behavior.

If adjustments are to be made in the customary behavior of faculty members within a college or university, then some very powerful incentives for change must be provided. The task of creative management at the level of state government is to provide this powerful incentive. It seems doubtful that enrollment projections as made separately by individual colleges and universities will by themselves be a sufficient cause for change in faculty behavior. Some reinforcement will probably be necessary.

Unfortunately, behavioral scientists have provided us with very little knowledge about the circumstances and forces that provide an incentive for change in human behavior. We generally realize that change may be brought about by a strong awareness of self-interest. Change may result from external competition and the anxieties or fears aroused by such competition. Change may result from crisis, from a collapse or evident failure in conventional modes of behavior. In almost every case, as the English historian Arnold Toynbee pointed out, change in social affairs results from dynamic leadership and the presence of a creative minority.

The threat of general economic decline, or at least the threat of an economic decline in higher education income as enrollments fall, should constitute a condition of crisis. Survival, and in the words of the Carnegie Foundation, more than survival, may well be at stake for a good many colleges and universities, public and private. When and if this threat becomes sufficiently perceived within particular colleges and universities, the possibility of an end to existence may provide a favorable environment for change.

Let me add my personal observation that computer print-outs from simulation models of future enrollment and income probabilities will not provide a sufficient motivation for change. These simulation models are an early warning device, a signal of events to come if traditional modes of behavior continue unchanged. But both the possibility of change and a motivation for change must be added to the picture of a dire future prospect.

If a college or university is to survive stable or declining enrollment of undergraduate degree-credit students of the traditional age-group, then it may need to seek an enlarged enrollment of students outside the traditional age-group. These non-traditional students may be of two kinds: older, part-time students already employed, and older part-time non-degree seeking students. To a substantial extent over the past 30 years many colleges and universities have preferred for various intellectual and other reasons to avoid part-time students, and especially the part-time non-degree student. And it must be pointed out that there are some higher education planners who think that the potential market of non-traditional part-time students, both degree-seeking and non-degree seeking, has been substantially over-estimated.

Creative management in response to the threat of declining enrollments will have to bring about two kinds of change in faculty behavior. One kind of needed change will be to assert the importance of instruction for the part-time student. The other kind of needed change is to assert the priority of non-degree instruction as a major

form of public service. Instruction must be restored to the art of informative and interesting communication if the non-traditional student is to be found, cultivated, and retained.

I am somewhat surprised that the 1975 Carnegie Foundation report, More Than Survival, says so little about motivation for change. Presumably the critical circumstances of the next 25 years are so readily apparent that there is no need to dwell upon the need for change. Insofar as individual colleges and universities are concerned, the Carnegie report recommends that each enterprise prepare an analysis describing clearly its present situation and projecting as accurately as possible the factors likely to influence future expectations. These analyses, made available to all constituents of the academic community, are expected to be part "of a larger effort designed to create attitudes receptive to and conditions conducive to change." The Foundation report further recommends that each college and university should develop an "overall strategy" for flexibility in the use of funds, the assignment of faculty, and the utilization of space. The report also underlines the importance for each college and university of "effective processes to make the necessary decisions."

Under the heading of desirable public policy decisions for a changing higher education social environment, the Carnegie Foundation report recommends action to make possible "universal access" to higher education by the year 2000. In addition, the report recommends that

each state should develop an explicit over-all policy toward its private sector of higher education relevant to the changing circumstances of the next 25 years. The final public policy proposal is that the federal government should develop a new, long-term policy about the research capacity needed in American universities and about the provision of support designed to maintain this capacity.

It is not my intention here to evaluate these recommendations set forth by the Carnegie Council on Policy Studies in Higher Education and by the trustees of the Carnegie Foundation for the Advancement of Teaching. I am sure that these recommendations will be carefully and critically examined in the planning process of creative management looking ahead to the changing circumstances of the remaining years of the Twentieth Century. What I do wish to emphasize here is the vital factor of motivation for change within colleges and universities, a factor to which I believe the Carnegie report gives too little attention.

My own expectation is that motivation for change within colleges and universities will have to be largely supplied externally. And this expectation means, as I have said before, that motivation will have to come primarily from creative management at the level of state government. My assessment of current circumstances is that present arrangements for governance within individual colleges and universities tend to be too fragmented, too indecisive, and too lacking in support of leadership to be competent to cope with the demands of change.

As I have thought about the kind of motivation that is needed as colleges and universities confront the threat of economic decline, I have found myself falling back upon the proposition that economic incentives may provide the sense of self-interest required to motivate faculty change. As we are all aware, two kinds of decision-making allocate the economic resources of society in general, and of higher education in particular. For lack of better terms I label these two kinds of decisions as "planning decisions" and "market decisions." For all colleges and universities in the United States--public and private, large and small, instructionally oriented and research oriented, urban located and small town located--the latest available data from the Higher Education General Information Survey show that approximately 70 percent of educational and general income was obtained from planning decisions. Of these planning decisions, approximately 60 percent of the income decisions were made by governments--federal, state, and local--while approximately 9 percent of the income decisions were made by the various sources of philanthropic giving, past and present. Only about 30 percent of educational and general income was obtained from market decisions, from decisions by students and others who determined for themselves where to enroll and what services to consume.

There are some kinds of planning decisions that must continue to be made by governments, especially the decision about how much of a research enterprise is to be maintained within universities and where. State governments must continue to decide how much of a

social investment it is necessary and desirable to make in the instruction of students. And of course I hope that philanthropic giving in support of higher education will continue and even expand in the years ahead.

The question still remains how the planning process of decisions about support of higher education can motivate change of attitudes and behavior within individual colleges and universities. I consider this question to be the single most important matter to be resolved by creative management at the state government level in the years ahead. And the corollary question is just this: would there be greater motivation for change if we were to increase the proportion of market decisions providing financial resources to individual colleges and universities, and even to component parts of universities?

I am well aware that I am raising here a profound issue of public policy in relation to national economics. To what extent should all economic activity be determined by planning decisions, that is, by national economic planning and governance? To what extent should all economic activity be determined by allocative decisions made by individuals in the market place? Socialist societies opt for national economic planning, and authoritarian regimes, fascist or communist, assert that governance of national economic planning must be performed by a one-party, totalitarian decision-making process. In a mixed economy such as that in the United States, our national society undertakes to make both planning decisions and market decisions, with a governance process of pluralistic institutions and enterprises

and of a government structure based upon the principles of a liberal democracy.

In a mixed economy of planning and market decisions; there is ever a certain amount of tension between the two economic procedures, and a certain amount of questioning about relative performance and relative proportions. Moreover, there is a certain amount of friction that perhaps tends to bring about the disequilibrium that we label recession. Incidentally, I think it is evident that socialist economies and totalitarian regimes experience their own kind of disequilibrium also, although most of us are uninformed about the nature and consequences of these particular imbalances.

It is not possible to explore here in some detail the relative merits of an allocative process based upon planning versus a process based upon the market as a mechanism for providing financial resources to higher education. This is a subject that deserves a separate paper. I want only to raise the issue as one possible response of creative management to the issue of motivation for change. Is it possible that creative management will find some advantage if the allocation of economic resources were increasingly made by a market process rather than by a planning process?

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In summary, let me emphasize that a circumstance of economic decline during the next twenty-five years for the American economy as a whole and for higher education in particular is by no means yet

a certain prospect. At a minimum it is reasonable to expect a slowdown in economic growth. And the prospect of a slowdown in economic growth is its own summons to a change in American attitudes, behavior, and public policy. The prospect of economic decline, to be sure, must not be ruled out as a future course of events, especially if we as a nation cannot find a peaceful and reasonable solution to the requirements of raw materials, energy, trained manpower, environmental protection, and efficient technology to sustain economic growth. Economic decline is one possibility for the future, and a very real probability if we cannot find alternative satisfactory lines of action.

And incidentally, let me assert once again that if there are satisfactory lines of action as an alternative to national economic decline, then higher education must surely have a major part in the exploration of those alternatives. This exploration is one of the most important tasks for higher education in the next 25 years.

Regardless of the course of events in the national economy, higher education as a social institution confronts its own particular possibility of economic decline if there is in fact an economic saturation of college educated talent in the American labor market. The prospective decline in the numbers of the college-age population in our society may be accompanied by a decline also in the proportion of college-age youth who decide it is worthwhile to go to college. A dual decrease in college-age youth and in the propensity of youth to invest in college means a period of economic decline for higher

education. However we may like or dislike the situation, higher education since World War II has been associated in the popular mind with affording a special contribution to employment, technology, and economic growth. If this special contribution is no longer perceived or valued, higher education as a social institution must and will experience economic decline.

Creative management is the hopeful potential as a response to the possibility of economic decline in higher education. Indeed, creative management is an essential of our day. In particular, I hope that that creative management will be especially evident at the level of state government. Such a creative management will evidence itself in planning and in the technology by which purposes, objectives, and performance are set for individual colleges and universities. This creative management will above all else reveal its quality in the motivation it provides for essential change within the colleges and universities themselves. These expectations and these hopes are no little dreams. But then when was anyone in higher education ever satisfied with little dreams!